REMARKS

Claims 1-39 are pending in this application. Claims 17-39 were withdrawn from consideration in a Response to Restriction Requirement filed on May 13, 2004. Claims 1-16 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent Application Publication No. 2003/0121799 A1 ("Stevens"). These rejections are respectfully traversed, for reasons including those set forth during today's teleconference between the Examiner and Applicants' attorney. However, claim 1 has been amended to distinguish more clearly the prior art relied upon.

Responses to Claim Rejections

As Applicants' attorney stated during today's teleconference, it is respectfully submitted that Stevens makes only passing references to supercritical processing and fails to teach many elements of the claimed invention. In order to distinguish more clearly the art relied upon, claim 1 has been amended to paraphrase the definitions of "supercritical" and "near supercritical" as set forth in the Background section of the present application (page 1, lines 12-13 and 15-18):

> 1. (currently amended) An apparatus for providing a solid precursor to a surface of a work piece via a supercritical solution, the apparatus comprising:
>
> a plurality of vessels for housing the solid precursor and allowing it to contact a solvent under supercritical or near supercritical conditions to generate a solution of the solid precursor, wherein supercritical conditions exist when the temperature and pressure of a solution are above the solution's critical temperature and pressure, and wherein near supercritical conditions exist when the reduced temperature and pressure of the solution are both greater than 80% of their critical point but the solution is not yet in a supercritical phase;
>
> a generator recirculation loop in fluid communication with the plurality of vessels and allowing the solution of the solid precursor to recirculate through the plurality of vessels, said solution being under

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supercritical or near supercritical conditions over its entire recirculation path; and

a delivery mechanism adapted to deliver, under supercritical or near supercritical conditions, a portion of the solution to a reactor for housing said work piece;

wherein the solid precursor is a solid at or about standard temperature and pressure.

It is respectfully submitted that Stevens does not teach any of the elements of claim 1. For example, Stevens, as understood, does not teach "a plurality of vessels for housing the solid precursor and ***allowing it to contact a solvent under supercritical or near supercritical conditions to generate a solution of the solid precursor.***" (Emphasis added.) The claim also recites "a delivery mechanism adapted to deliver, under supercritical or near supercritical conditions, a portion of the solution to a reactor for housing said work piece." The importance of dissolving solid precursors under supercritical or near supercritical conditions before introduction to a supercritical reactor is noted in the specification:

> [C]onventionally a supercritical reactor is charged with a solid precursor, a substrate, and a solvent, and then the system is brought to supercritical conditions to dissolve the precursor and achieve a result. The present invention allows much more flexibility and control than conventional systems by dissolving solid precursors before introduction into a supercritical reactor. This dissolution is done using a solvent under supercritical or near supercritical conditions. In some cases, this is done to avoid contamination by organic solvents (for example, a common problem in IC fabrication, especially with fluorinated solvents). In this way, the superior solvating properties of supercritical solvents are utilized and at the same time the use of traditional organic solvents is avoided.

(Id. at p. 9, lines 13-22.)

As understood, Stevens also fails to teach "a generator recirculation loop in fluid communication with the plurality of vessels and allowing the solution of the solid precursor to recirculate through the plurality of vessels, ***said solution being under***

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supercritical or near supercritical conditions over its entire recirculation path." (Emphasis added.) During today's teleconference, the Examiner initially suggested that this feature is taught by Fig. 3 of Stevens.

However, Applicants' attorney noted that there is no suggestion in Fig. 3 or the accompanying description that the "fast loop recirculating bath arrangement" maintains a solution under supercritical or near supercritical conditions over its entire recirculation path. On the contrary, the description states that "[f]low of fluid through the recirculation fast loop depends on there being sufficient pressure drop across the loop, which may necessitate restriction or adjustment of the flow through the main recirculation system, as appropriate." (Stevens at ¶ 107.) There is no indication that the solution within the "fast loop recirculating bath arrangement" is *ever* in a supercritical condition. The foregoing statement indicates the need for a considerable pressure drop for the "fast loop recirculating bath arrangement," which seems to teach away from maintaining the solution under supercritical or near supercritical conditions over its entire recirculation path.

Claim 1, the only pending independent claim, is therefore allowable over the art relied upon. Claims 2-16 are allowable as dependent from claim 1. Although there are independent grounds for the allowability of dependent claims 2-16, they are moot considering the foregoing statements and therefore are not discussed in this paper. Applicants' attorney reserves the right to assert further grounds for the allowability of claims 1-16.

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Conclusion

Claims 1-16 define novel and non-obvious subject matter of the present invention. Therefore, a notification that the application is in condition for allowance is earnestly solicited. Please telephone Applicants' attorney if the Examiner believes that there are any issues requiring further discussion or clarification. If any fees are due in connection with the filing this paper, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. NOVLP030).

Respectfully submitted,
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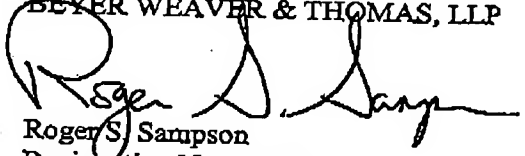

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